



Complete Summary

TITLE

Side effect monitoring practices for non-steroidal anti-inflammatory drugs (NSAIDs): percentage of patients treated with daily NSAIDs (selective or nonselective) with risk factors for developing renal insufficiency for whom serum creatinine is assessed at baseline and at least once in the first year following initiation of therapy.

SOURCE(S)

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. *Arthritis Rheum* 2004 Apr 15;51(2):193-202. [PubMed](#)

Saag KG, Olivieri JJ, Patino F, Mikuls TR, Allison JJ, MacLean CH. Measuring quality in arthritis care: the Arthritis Foundation's quality indicator set for analgesics. *Arthritis Rheum* 2004 Jun 15;51(3):337-49. [89 references] [PubMed](#)

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients treated with daily non-steroidal anti-inflammatory drugs (NSAIDs) (selective or nonselective) with risk factors for developing renal insufficiency for whom serum creatinine is assessed at baseline and at least once in the first year following initiation of therapy.

RATIONALE

Monitoring non-steroidal anti-inflammatory drug (NSAID) therapy can reduce the incidence and severity of associated adverse events.

NSAIDs are associated with side effects. The American College of Rheumatology and others recommend specific tests at baseline and follow-up at specified time period.

PRIMARY CLINICAL COMPONENT

Non-steroidal anti-inflammatory drugs (NSAIDs); risk factors for developing renal insufficiency; side effect monitoring; serum creatinine

DENOMINATOR DESCRIPTION

Patients treated with daily non-steroidal anti-inflammatory drugs (NSAIDs) (selective or nonselective) with risk factors for developing renal insufficiency*

***Note:** For the purpose of this measure, renal insufficiency risk factors include age greater than or equal to 75 years, diabetes mellitus, hypertension, angiotensin-converting enzyme inhibitor or diuretic use.

NUMERATOR DESCRIPTION

Patients for whom serum creatinine is assessed at baseline and at least once in the first year following initiation of therapy

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses
Physician Assistants
Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Unspecified

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

- *Renal risks of nonselective NSAIDs.* At least 8 case-control studies have reported an increased risk of both acute and chronic renal dysfunction with use of nonselective NSAIDs. In contrast, a large prospective cohort over a 14-year study period, the Physician's Health Study (n = 11,032) found no associations between self-reported use of acetaminophen, aspirin, or other NSAIDs and elevated serum creatinine (greater than or equal to 1.5 mg/dl) or

- reduced creatinine clearance (less than or equal to 55 ml/minute). The results of this large cohort study are further substantiated by 2 additional cohort studies that did not identify any association between NSAID use and long-term renal adverse events.
- *Renal risks of COX-2-selective NSAIDs.* Predominately observational study data using surrogate endpoints, and to a lesser extent RCT results, demonstrate increased risk of renal toxicity with nonselective and COX-2-selective NSAIDs.

EVIDENCE FOR BURDEN OF ILLNESS

Saag KG, Olivieri JJ, Patino F, Mikuls TR, Allison JJ, MacLean CH. Measuring quality in arthritis care: the Arthritis Foundation's quality indicator set for analgesics. *Arthritis Rheum* 2004 Jun 15;51(3):337-49. [89 references] [PubMed](#)

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Safety

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Patients treated with daily non-steroidal anti-inflammatory drugs (NSAIDs) (selective or nonselective) with risk factors for developing renal insufficiency

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients treated with daily non-steroidal anti-inflammatory drugs (NSAIDs) (selective or nonselective) with risk factors for developing renal insufficiency*

***Note:** For the purpose of this measure, renal insufficiency risk factors include age greater than or equal to 75 years, diabetes mellitus, hypertension, angiotensin-converting enzyme inhibitor or diuretic use.

Exclusions

Unspecified

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Therapeutic Intervention

DENOMINATOR TIME WINDOW

Unspecified

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients for whom serum creatinine is assessed at baseline and at least once in the first year following initiation of therapy

Exclusions

Unspecified

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Laboratory data
Medical record
Pharmacy data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

A multidisciplinary expert panel comprised of nationally recognized experts discussed and rated the validity of each of the proposed measures based on the evidence and their expert opinion using a modification of the RAND/UCLA Appropriateness Method.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. *Arthritis Rheum* 2004 Apr 15;51(2):193-202. [PubMed](#)

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Identifying Information

ORIGINAL TITLE

Quality indicator 10. Side effect monitoring practices for NSAIDs: risk of renal insufficiency.

MEASURE COLLECTION

[The Arthritis Foundation's Quality Indicator Project](#)

MEASURE SET NAME

[The Arthritis Foundation's Quality Indicator Set for Analgesics](#)

SUBMITTER

Arthritis Foundation

DEVELOPER

Arthritis Foundation
RAND Health
University of Alabama at Birmingham

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2004 Jun

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

MacLean CH, Saag KG, Solomon DH, Morton SC, Sampsel S, Klippel JH. Measuring quality in arthritis care: methods for developing the Arthritis Foundation's quality indicator set. *Arthritis Rheum* 2004 Apr 15;51(2):193-202. [PubMed](#)

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MEASURE AVAILABILITY

The individual measure, "Quality Indicator 10. Side Effect Monitoring Practices for NSAIDs: Risk of Renal Insufficiency," is published in "Measuring Quality in Arthritis Care: The Arthritis Foundation's Quality Indicator Set for Analgesics."

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NQMC STATUS

This NQMC summary was completed by ECRI on August 7, 2007. The information was verified by the measure developer on September 10, 2007.

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